asynchronous mesh to the egress interfaces, the egress interfaces to receive data from the asynchronous mesh and to transmit the data to external destinations.

2. (Unamended) The network switch of claim 1 wherein the ingress interfaces schedule respective data transmissions across the mesh and the egress interfaces schedule respective data transmissions to the external destinations.

3. (Unamended) The network switch of claim 2 comprising N ingress interfaces, each of the egress interfaces further comprising N independent cache buffers coupled to N respective ingress interfaces to receive data from the respective N ingress interfaces.

4. (Unamended) The network switch of claim 2 comprising N ingress interfaces, each of the N ingress interfaces having N independent cache buffers, each of the N independent cache buffers coupled to one of N respective egress interfaces.

5. (Canceled)

6. (Unamended) The network switch of claim 3 in which the egress interfaces generate a flow control signal to prevent access to one or more of the N buffers of the respective egress interfaces.

7. (Unamended) The network switch of claim 3 wherein the egress interfaces generate a flow control signal to prevent transmission to one or more of the N buffers of the respective egress interfaces.

8. (Unamended) The network switch of claim 3 wherein the N ingress interfaces transfer data to a shared egress buffer and further wherein the egress interfaces schedule and retrieve the data stored in the shared egress buffer prior to transmitting the data to the external destinations.

9. (Amended) The network switch of claim 2 in which the egress interfaces generate a flow control signal to prevent access by one or more of the queues at the ingress interfaces to the egress buffer.

10. (Unamended) The network switch of claim 3 in which the N ingress interfaces concurrently transmit fixed-length cells and variable-length packets across the mesh to the egress interfaces.

11. (Unamended) A network switch comprising:

a plurality of ingress cards, the plurality of ingress cards having an ingress buffer to temporarily store data, an ingress scheduler coupled to the ingress buffer, and a plurality of ports coupled to the ingress scheduler, the ingress scheduler to read data from the ingress buffer and to selectively transfer the data to one of the plurality of ports; and

a plurality of egress cards, the plurality of egress cards having a plurality of ports coupled to receive data from respective ingress card ports, an egress buffer coupled to the plurality of ports, the egress buffer to selectively read data from the plurality of ports and to store the data, and an egress scheduler coupled to the egress buffer, the egress scheduler to read data from the egress buffer and to transmit data from the egress card.

12. (Unamended) The network switch of claim 11 wherein the ingress scheduler transfers data from the ingress buffer in a first in/first out (FIFO) manner.

13. (Unamended) The network switch of claim 11 wherein the ingress scheduler transfers data from the ingress buffer according to priorities associated with the data.

14. (Unamended) The network switch of claim 11 wherein the ingress buffer receives telecommunications data.

15. (Unamended) The network switch of claim 11 wherein the plurality of ports of the egress cards further comprise one or more buffers to temporarily store data received from the respective ingress cards, and further wherein if a buffer of a port of an egress card is full the buffer and the port refuse data transmitted from the associated ingress card.

16. (Unamended) The network switch of claim 15 wherein the associated ingress card from which data was refused retransmits the refused data until the associated egress port and buffer accept the previously refused data.

17. (Unamended) The network switch of claim 11 wherein the egress buffers include a data store for each of the plurality of ports of the egress card.

18. (Unamended) The network switch of claim 17 wherein the data store for each of the plurality of ports of the egress card stores the data according to an associated class.

19. (Unamended) A network switch comprising:

N ingress cards coupled to receive data from external sources, the N ingress cards having a plurality of ports to transmit data, wherein each of the N ingress cards comprises an ingress scheduler coupled to the ports of the ingress card, the ingress scheduler to cause data to be selectively and asynchronously transmitted via the ports of the ingress card; and

M egress cards having ports coupled to receive data from one or more of the plurality of ports of the N ingress cards, the egress cards coupled to transmit data to external destinations, wherein each of the M egress cards comprises an egress scheduler coupled to the ports of the egress card, the egress scheduler to cause data to be selectively transmitted to the external destinations.

20. (Unamended) The network switch of claim 19 wherein N and M are equal.

21. (Canceled)

22. (New) The network switch of claim 2 wherein one or more of the N ingress interfaces segregates incoming data into queues based on a flow identifier.

23. (New) The network switch of claim 2 wherein one or more of the N ingress interfaces segregates incoming data into queues based on a user identifier.

24. (New) The network switch of claim 2 wherein one or more of the N ingress interfaces segregates incoming data into queues based on a session identifier.

B3

25. (New) The network switch of claim 2 wherein one or more of the N ingress interfaces segregates incoming data into queues based on a quality of service (QoS) identifier.

26. (New) The network switch of claim 2 wherein one or more of the N ingress interfaces segregates incoming data into queues based on a priority identifier.

27. (New) The network switch of claim 2 wherein one or more of the N ingress interfaces segregates incoming data into queues based on a deadline identifier.

28. (New) The network switch of claim 2 wherein one or more of the N ingress interfaces segregates incoming data into queues based on a service class identifier.

B3 C4

29. (New) The network switch of claim 19 wherein one or more of the ingress interfaces segregates incoming data into queues based on a flow identifier.

30. (New) The network switch of claim 19 wherein one or more of the ingress interfaces segregates incoming data into queues based on a user identifier.

B3 Cont.

31. (New) The network switch of claim 19 wherein one or more of the ingress interfaces segregates incoming data into queues based on a session identifier.

32. (New) The network switch of claim 19 wherein one or more of the ingress interfaces segregates incoming data into queues based on a quality of service (QoS) identifier.

33. (New) The network switch of claim 19 wherein one or more of the ingress interfaces segregates incoming data into queues based on a priority identifier.

34. (New) The network switch of claim 19 wherein one or more of the ingress interfaces segregates incoming data into queues based on a deadline identifier.